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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,701	09/19/2006	Wai-Kuen Lui	865-B-PCT-US	3093

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EXAMINER

MAI, HAO D

ART UNIT	PAPER NUMBER
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3732

MAIL DATE	DELIVERY MODE
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04/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,701	Applicant(s) LUI ET AL.	
	Examiner HAO D. MAI	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22 and 24-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22, 24-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 22, 24-27, 31-38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Maloney (3,533,420) in view of Chodorow et al. (2005/0217692 A1).** *Note that the US provisional or foreign applications of Chodorow et al. have at least a 102(e) date over the instant application.*

Regarding claim 22, Maloney discloses a dental hygiene apparatus comprising: an elongated handling means 10 having a longitudinal axis; a teeth-cleaning means 12 comprising arms 22, 24, that secure one or more lengths of interdental material 30, wherein the interdental material is oriented longitudinally as related to the longitudinal axis of the handling means (Figs. 1-4). In a second embodiment of Figures 5-6, Maloney further discloses a flexible means (hinge 64/66) between the teeth-cleaning means and the handling means, wherein the flexible means is integral with the teeth-cleaning means and the flexible means 66 is pliable so that the interdental material can be brought laterally to either side of the longitudinal axis of the handling means to have an about 90 degrees angle between the interdental material and the longitudinal axis of the handling means (column 2 lines 64-75).

Maloney discloses the invention substantially as claimed except for the flexible means, the teeth-cleaning means and the handling means are of one construction, i.e. monolithic. Nonetheless, such flexible means being monolithic with a structure is a well known flexible mechanism called living hinge - a thin flexible hinge made from plastic that joins two rigid

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plastic parts together, typically manufactured in injection molding operation that creates all three parts at one time as a single part, i.e. monolithic. For example, Chodorow et al. disclose a floss device having such living hinge 22 (Fig. 2) connecting and is monolithic to handle 12 and head 15. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Maloney by substituting spring hinge 64/66 with a integrated or monolithic living hinge as taught by Chodorow et al. Such substitution would produce the same and/or predictable results. Furthermore, such substitution would allow for a more cost effective manufacture of the device since less parts and/or materials are needed.

As to claims 24-25, and 27, Maloney and Chodorow et al., each by itself or both combined, show the interdental material being dental floss, the elongated handling means comprises various tapered portions at one end, and the teeth-cleaning means is capable of adhering to a new position after flex adjustment at the flexible means (Maloney - column 2 line 74; Chodorow - by hook 25A shown in Fig. 4).

As to claims 31-33, and 38, Maloney/Chodorow disclose all the claimed elements as detailed above. As to claims 35, note that the whole handle, including the tapered end, is pliable at hinge 64/66 so that it can be bent about 90 degrees to the right or to the left. As to claim 37, the apparatus as disclosed by Maloney/Chodorow is made of plastic which is a thermoplastic resin.

As to claims 26, 34, and 36, Maloney does not disclose the chisel-shaped or pointed tapered end portion (claims 26, 34) and the ridges or grooves on the elongated handle (claim 36). Chodorow et al. disclose a dental hygiene apparatus having a chisel-shaped or pointed tapered end 25 and ridges along the handle (Fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a chisel-shaped or pointed tapered end at one end of the handle so that the pointed end can be used to scrape

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out hard plaque on the teeth as explicitly taught by Chodorow et al. Furthermore, it would also have been obvious to one having ordinary skill in the art at the time the invention was made to include ridges and/or grooves on the elongated handle in order to establish an easy and secure grip of the handle, preventing slippage of the apparatus from the user's grasp.

3. Claims 28-30 and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maloney in view of Chodorow et al., and further in view of Gordon (5,184,719).

Maloney/Chodorow disclose the invention substantially as claimed. However, Maloney/Chodorow fail to disclose a guarding means for preventing a user from using said apparatus. Gordon discloses a dental hygiene apparatus having a guarding means (package 21) capable of preventing a user from using the teeth-cleaning means/toothbrush 12 (Fig. 1). Package 21 comprises a locking device (the perimeter seal) that fits into a mating recess on the teeth-cleaning means; note the mating recess being the tapering recessed neck part of toothbrush head 12 where package's perimeter seal wraps around (Fig. 1). The guarding means/package 21 comprise a thin material that securely covers the teeth-cleaning means 12 and cannot be removed without destruction of said material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include such package as a guarding means to Maloney in order to prevent tampering and maintain the device clean and free of contamination prior to usage.

Response to Arguments

4. Applicant's arguments with respect to the rejected claims have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAO D. MAI whose telephone number is (571)270-3002. The examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private

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PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hao D Mai/
Examiner, Art Unit 3732

/Cris L. Rodriguez/
Supervisory Patent Examiner, Art Unit 3732